



Operation and Care Manual



Asepsis 21 Delivery System

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Owner's Product Identification

(Information that you will need to provide for servicing - key information is highlighted)

Date of Purchase

Serial Number

Name of Owner / Facility / Department

Model Number

Name of Authorized Knight Dealer

Telephone # of Authorized Knight Dealer

Address of Authorized Knight Dealer

IMPORTANT INFORMATION

Intended Use of Product

This delivery system is intended to provide dental professionals with water & air to operate dental handpieces, syringes, and Midmark authorized accessories during dental exams and procedures.

Authorized CE Representative

Countries in the EEC should direct all questions, incidents, and complaints to Midmark's Authorized CE representative:

Promotal
22, Rue de St. Denis
53500 Ernee
France

Phone: 33-2-430-517-76
Fax: 33-2-430-569-10

Transportation / Storage Conditions

- Ambient Temperature Range -22° to 140° F (-30° to 60°C)
- Relative Humidity 10% to 90% (non-condensing)
- Atmospheric Pressure 500hPa to 1060hPa (0.49atm to 1.05atm)

Label Definitions



DANGER

A **DANGER** is used for an imminently hazardous operating procedure, practice, or condition which, if not correctly followed, will result in loss of life or serious personal injury.



WARNING

A **WARNING** is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in loss of life or serious personal injury.



CAUTION

A **CAUTION** is used for a potentially hazardous operating procedure, practice, or condition which, if not correctly followed, could result in minor or moderate injury. It may also be used to alert against unsafe practices.



EQUIPMENT ALERT

An **EQUIPMENT ALERT** is used for an imminently or potentially hazardous operating procedure, practice, or condition which, if not correctly followed, will or could result in serious, moderate, or minor damage to unit.



Type B, Applied Part



Consult manual for important information



Dangerous voltage / shock hazard



Fuse rating specification



Protective earth ground



Fragile



Proper shipping orientation



Min. / max. storage temperatures



Keep dry



Hot surface



ON



Standby



Duty cycle: (motor run time 30 sec. ON, 5 min. OFF)



Cup Fill water flow adjustment



Bowl Flush water flow adjustment



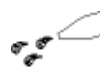
"City" water



Self-contained (distilled) water system



Handpiece drive air adjustment



Handpiece / Syringe coolant water flow adjustment



Handpiece coolant air adjustment /
Air quick connect port



Water quick connect port



Unlocked (chair rotation)



Locked (chair rotation)



Handpiece flush button
(Note: Remove handpiece from station
then remove handpiece from tubing
connector)

RATING FOR 120 VOLT UNIT

KNIGHT by MIDMARK, Versailles, Ohio, USA		
120 VOLTS	50/60 HERTZ	AIR 80/100 PSI WATER 30/50 PSI
15 AMPS MAX TOTAL CONNECTED LOAD		
THIS EQUIPMENT IS RATED TYPE I, CLASS B		



CONFORMS TO
UL STD. 2601-1
CERTIFIED TO
CAN/CSA - C22.2
NO. 601.1



RATING FOR 240 VOLT UNIT

KNIGHT by MIDMARK, Versailles, Ohio, USA		
240 VOLTS	50/60 HERTZ	AIR 80/100 PSI WATER 30/50 PSI
7.5 AMPS MAX TOTAL CONNECTED LOAD		
THIS EQUIPMENT IS RATED TYPE I, CLASS B		



Introduction

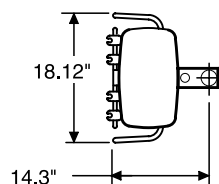
Your Asepsis 21 Chair Mounted Delivery System by Knight Manufacturing has been designed and manufactured with care and you in mind. It is constructed of the highest quality material to provide years of trouble free service.

The instrument head provides for the control of up to five air operated handpieces and a 3-way syringe. The handpieces are stored in their respective holders which may be rotated to your preferred position. When the handpiece is removed from the holder, it is automatically selected to operate when the foot control is depressed.

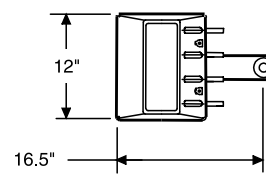
Your new Asepsis 21 also features a handpiece lubricant collection system. The handpiece exhaust tubes from the four port handpiece tubes are connected to a collector jar which is located on the bottom center of the instrument head. The collection jar can be removed to be emptied and

cleaned simply by unscrewing it from the unit. The collector jar should be inspected daily and emptied when approximately 1/2 inch of oil has accumulated.

The aerodynamic shape of the instrument head lends itself to easy cleaning or wrapping for infection control.

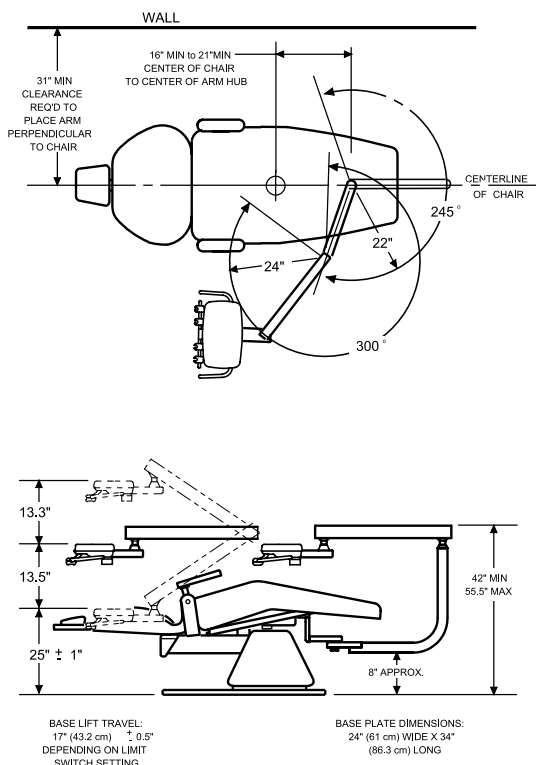


Asepsis 21
Delivery Head

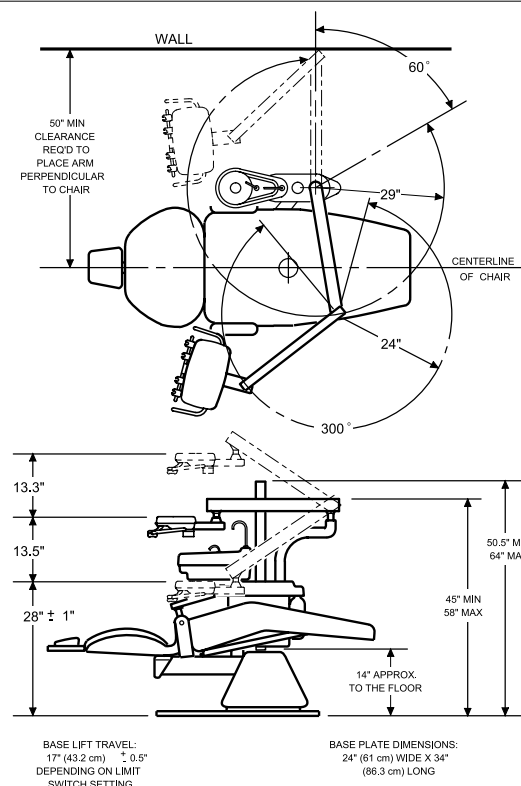


International
Delivery Head

KA940100



CONCEPT LR UNIT



CHAIR MOUNTED CONSOLE UNIT

KA940200

Controls

ASEPSIS 21 HANDPIECE DELIVERY SYSTEM CONTROLS LOCATED UNDER COVER

A complete set of handpiece and syringe adjustments are located directly under the magnetically held cover for protection against contamination. Lift up either back corner of the cover for easy removal. All controls are labeled with symbols identifying their function. A description of their locations and functions are identified below.

1-2-3 ~

HANDPIECE COOLANT WATER VOLUME

Adjusts the amount of coolant water to each respective handpiece.

4-5-6 ~ DRIVE AIR PRESSURE SETTING

Individual adjustments are provided - one for each respective handpiece. Set the maximum handpiece pressure indicated on the gage. Refer to the handpiece manufacturer's specifications for proper setting.

7 ~ SYRINGE AIR VOLUME ADJUSTMENT

Controls the volume of air to the syringe and effects water spray pattern.

8 ~ SYRINGE WATER

VOLUME ADJUSTMENT

Controls the volume of water to the syringe and effects water spray pattern.

9 ~ COOLANT AIR VOLUME ADJUSTMENT

This adjustment controls the volume of coolant delivered to each handpiece. It effects the spray pattern of air and water at the handpiece. If the handpiece has a coolant air connection in the handpiece itself, this adjustment will have no effect and can be completely shut off.

10 ~ HANDPIECE PRESSURE GAGE

Indicates individual handpiece pressure when the handpiece is operating.

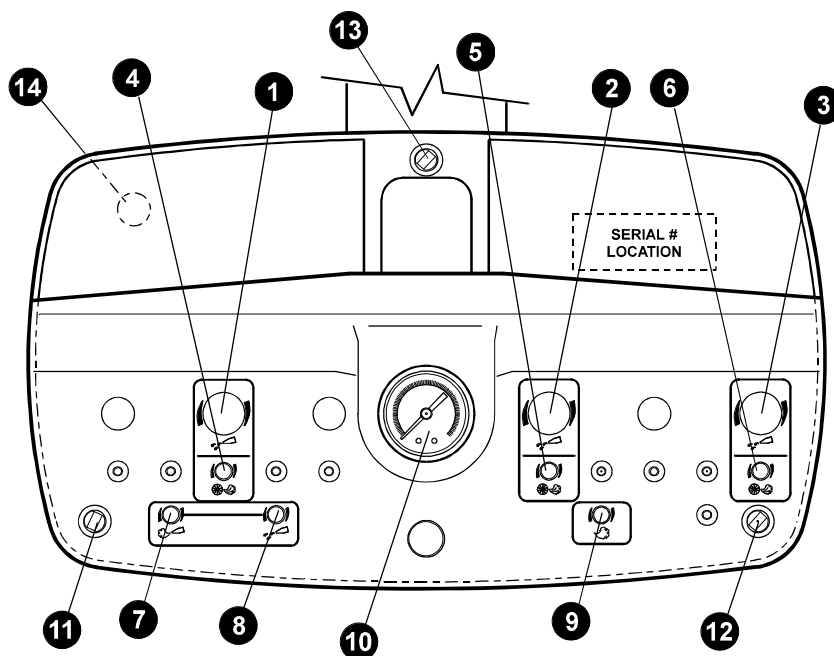
11-12-13 ~ MAGNETIC LATCHES

These hold the cover in place.

14 ~ HANDPIECE COOLANT WATER FLUSH BUTTON

Controls the coolant water flush valve and is located on the underside of the delivery head.

ASEPSIS 21 INSTRUMENT HEAD
WITH TOP COVER REMOVED



Controls

EXTERNAL CONTROLS AND FUNCTIONS

MAIN ON /OFF VALVE

Located on the bottom center of the instrument head directly behind the handpiece holder bar support, this two position toggle control turns the main air and water on or off (See the illustration below).

ARM LOCK

Located on the bottom of the instrument head adjacent to the handle, this two position toggle controls the arm lock mechanism.

AUTOMATIC HANDPIECE ACTIVATION

The automatic kink valves are designed to permit activation of the selected handpiece when it is removed from its holder. Drive air will be delivered to the withdrawn handpiece when the foot control is depressed.

WET/DRY FOOT CONTROL

The disc-type foot control operates

the selected handpiece at varying speeds depending upon the foot pressure applied to the disc. Positioning the coolant water selector toggle allows coolant water for wet cutting to be selected by the motion of the foot. Applying foot pressure to the disc will operate the selected handpiece and, if turned on, water spray (See the illustration below).

WATER ON/OFF VALVE

Located on the foot control, this switch provides water for coolant spray to the handpiece when the switch is moved forward to the "On" position (toward blue dot) and the foot control is depressed (wet cutting). When the valve is in the "Off" position, water will not be delivered to any handpiece (See the illustration below).

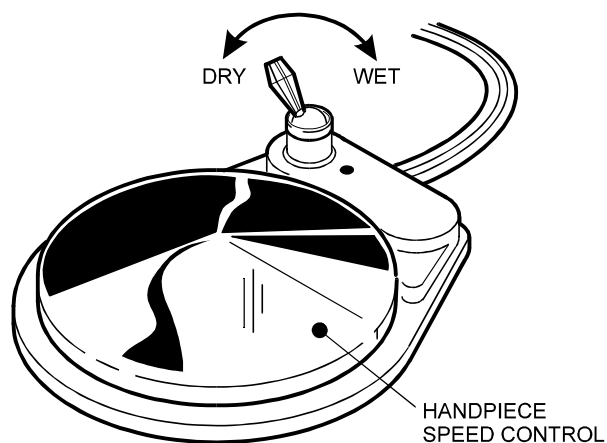
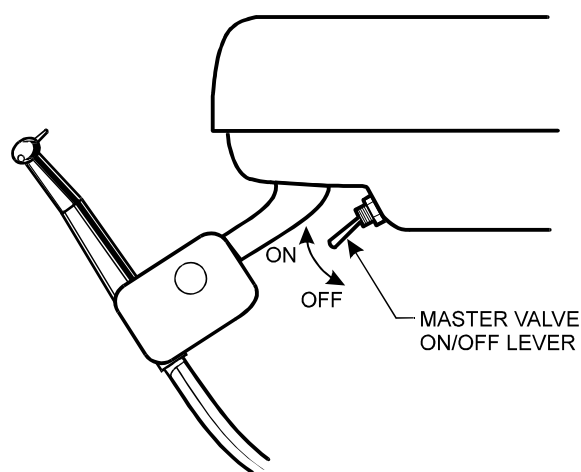
WATER OUTLET AND FLOW CONTROL

Located on the front panel of the console, the water outlet provides water for hydrocolloid tubing or

other accessories. The water is controlled by a flow control knob located next to the water outlet. Turning the knob clockwise will decrease water flow and counter clockwise increases the flow.

ASSISTANT'S INSTRUMENTATION

A saliva ejector, HVE and syringe are standard instrumentation on the unit. They are positioned on a movable holder located on the console. Syringe tip, saliva ejector valve assembly and HVE valve assembly are easily remove and autoclave.



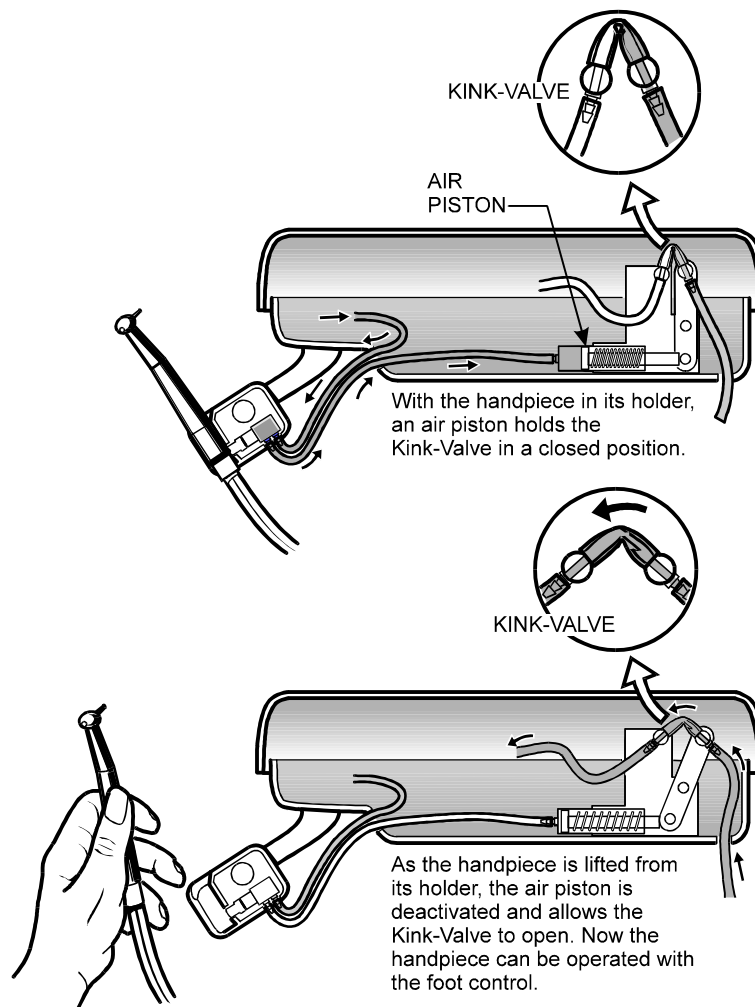
WET/DRY FOOT CONTROL

Operation

The automatic kink valves are designed to permit activation of the selected handpiece when it is removed from its holder. Drive air will be delivered to the withdrawn handpiece when the foot control is depressed (See the illustration).

~ BASIC OPERATION ~

1. Turn on the master valve lever located on the underside of the Asepsis 21 instrument head.
2. Flip the wet/dry toggle on the foot control to the desired position.
3. Lift the handpiece from its holder and depress the foot control.
4. If necessary, make adjustments by lifting the cover off the Asepsis 21 head and adjusting the control knobs as desired. (See Controls Section).



Cleaning and Maintenance

Knight Mfg. strongly recommends barrier protection as the most effective and safest way to control cross contamination. Some disinfections may cause costly damage to the equipment. If disinfectants are to be used, we recommend the products listed below. Follow manufacturers directions carefully.

CLEANING THE UNIT SURFACES

Surfaces should be wiped regularly with a soft cloth. The equipment should be washed occasionally with soap and water.



CAUTION: Avoid using agents containing Phenol water and/or phenol alcohol. These may cause damage to plastic surfaces.

The following disinfectant/cleaner products have been tested and are recommended for use on plastic and painted surfaces.

Cavicide

distributed by E&D Dental Products Inc., Westfield, NJ

Precise - Hospital Foam Cleaner Disinfectant

manufactured by Caltech Industries, Inc., Midland, MI



CAUTION: Failure to follow manufacturer directions may damage surfaces.

CLEANING HANDPIECE, SYRINGE AND VACUUM

HOSES

The hoses can be washed with soap and water.

MAINTAINING THE VACUUM SYSTEM

Use only a cleanser specifically formulated for dental vacuum systems and follow manufacturer directions carefully.



CAUTION: Failure to follow manufacturer directions may damage your vacuum system.

basket strainer can be ordered under Knight Part Number 151894.

SERVICING THE AIR AND WATER FILTERS

To insure proper air and water flow, the internal air and water filters should be serviced every three months (More or less frequently depending on water quality). This work should be performed by a qualified service technician. Please contact your authorized Knight dealer for more information.

CLEANING THE SOLIDS COLLECTOR

Turn off the vacuum supply. Lift up the cap on top of the solids collector to expose the basket strainer. Empty the basket strainer and scrub it with a brush. To help simplify the basket removal, wet the inside of the solids collector with the syringe after removing the cover. The water will soften the amalgam for easier removal of the basket. When clean, return the basket to the collector and replace the cap. The solids collector should be cleaned daily to avoid loss of suction. Replacement

CLEANING AND MAINTENANCE SCHEDULE

	as necessary	daily	other
Unit surfaces	√		
Hoses	√		
Vacuum system	√		
Solids collector		√	
Air & water filters			3 month service

Warranty

WARRANTY

Knight by Midmark products are warranted against defect in material and workmanship for a period of 2 years, unless otherwise indicated in writing, from the time of delivery.

Exceptions:

- 1) "KINK-VALVE" module carries a 10 year warranty.
- 2) The original light bulb on a new light carries a 1 year warranty.
- 3) Accessories not manufactured by Knight are excluded (i.e. Fiber optic systems, Scalars, Electric micromotor systems, Curing light systems, X-ray viewers, etc.)
- 4) Replacement parts and accessories carry a 90 day warranty.

Knight's sole obligation under the warranty is either to provide parts for the repair or to provide the replacement product (excluding labor and shipping). The buyer shall have no other remedy. All special, incidental and coincidental damage is excluded. Written notice of breach of warranty must be given to Knight within the warranty period.

The warranty does not cover damage resulting from improper installation or maintenance, accident or misuse. The warranty does not cover damage resulting from the use of cleaning, disinfecting or sterilization chemicals and processes.

No other warranties as to merchantability, fitness for use or otherwise are made.

Technical Information

Circuit diagrams, parts lists, technical descriptions, etc. will be provided upon request.

Notes

DECLARATION OF CONFORMITY



MIDMARK CORPORATION

Midmark Corporation declares that SW and S-21 Dental Units conforms to the applicable requirements of the Medical Device Directive 93/42/EEC, Annex V and VII.

Serial Numbers: UA1278, UW01032, UC0971, and UK0148 to present.

Authorized Representative

Promotal
22 Rue De St. Denis
53500 Ernee
France

Notified Body

LRQA Limited
Hiramford
Middlemarch Office Village
Siskin Drive
Coventry CV3 4FJ
England

Certificate #: 961351/B

Quality Assurance Manager

Gene Harshbager
Midmark Corporation
60 Vista Drive PO Box 286
Versailles, OH 45380 U.S.A.
October 18, 1999

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KA940600

Knight®
by Midmark

Midmark Corporation • P O Box 286 • 60 Vista Drive
Versailles • Ohio • 45380-0286 • www.midmark.com
Phone: 937-526-3662 Fax: 937-526-5542